

STATE WATER RESOURCES CONTROL BOARD
UNDERGROUND STORAGE TANK REGULATIONS
TITLE 23, DIVISION 3, CHAPTER 16, CCR
AMENDMENTS FOR IMPLEMENTATION OF SB 989

February 15, 2001

FINAL PROPOSED TEXT OF REGULATIONS

Amend Title 23, Division 3, Chapter 16, Article 1, section 2611 of the California Code of Regulations to read as follows:

2611. Additional Definitions

Unless the context requires otherwise, the following definitions shall apply to terms used in this chapter.

"Bladder system" means a flexible or rigid material which provides primary containment including an interstitial monitoring system designed to be installed inside an existing underground storage tank.

"Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. The term includes only persons who have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

"Coatings expert" means a person who, by reason of thorough training, knowledge, and experience in the coating of metal surfaces, is qualified to engage in the practice of internal tank lining inspections. The term includes only those persons who are independent of any lining manufacturer or applicator and have no financial interest in the tank or tanks being monitored.

"Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the underground storage tank.

"Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which hazardous substances flow. For the purpose of determining how much piping is connected to any individual underground storage tank system, the piping that joins two underground storage tank systems should be allocated equally between them.

"Continuous monitoring" means a system using equipment which routinely performs the required monitoring on a periodic or cyclic basis throughout each day.

"Corrosion specialist" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on metal underground storage tanks and associated piping. The term includes only persons who have been certified by the National Association of Corrosion Engineers or registered professional engineers who have certification or licensing that requires education and experience in corrosion control of underground storage tanks and associated piping.

"Decommissioned tank" means an underground storage tank which cannot be used for one or more of the following reasons: 1) the tank has been filled with an inert solid; 2) the fill pipes have been sealed; or, 3) the piping has been removed.

"Dispenser" means an aboveground or underground device that is used for the delivery of a hazardous substance from an underground storage tank. Dispenser includes metering and delivery devices, and fabricated assemblies located therein.

"Emergency containment" means a containment system for accidental spills which are infrequent and unpredictable.

"Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the underground storage tank system is placed at the time of installation.

"Existing underground storage tank" means an underground storage tank that was installed prior to January 1, 1984. The term also includes an underground storage tank installed before January 1, 1987 and which is located on a farm, has a capacity greater than 1,100 gallons, and stores motor vehicle fuel used primarily for agricultural purposes and not for resale.

"Farm tank" means any one tank or a combination of manifolded tanks that: 1) are located on a farm; and 2) hold no more than 1,100 gallons of motor vehicle fuel which is used primarily for agricultural purposes and is not held for resale.

"First ground water" means the uppermost saturated horizon encountered in a bore hole.

"Free product" refers to a hazardous substance that is present as a non-aqueous phase liquid (e.g., liquid not dissolved in water).

"Ground water" means subsurface water which will flow into a well.

"Hazardous substance" means a substance which meets the criteria of either subsection (1) or subsection (2) of section 25281(f) of the Health and Safety Code.

"Heating oil tank" means a tank located on a farm or at a personal residence and which holds no more than 1,100 gallons of home heating oil which is used consumptively at the premises where the tank is located.

"Holiday," when used with respect to underground storage tank coating or cladding, means a pinhole or void in a protective coating or cladding.

"Hydraulic lift tank" means a tank holding hydraulic fluid for a closed loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

"Inconclusive" means the conclusion of a statistical inventory reconciliation report that is not decisive as to whether a release has been detected.

"Independent testing organization" means an organization which tests products or systems for compliance with voluntary consensus standards. To be acceptable as an independent testing organization, the organization shall not be owned or controlled by any client, industrial organization, or any other person or institution with a financial interest in the product or system being tested. For an organization to certify, list, or label products or systems in compliance with voluntary consensus standards, it shall maintain formal periodic inspections of production of products or systems to ensure that a listed, certified, or labeled product or system continues to meet the appropriate standards.

"Independent third party" means independent testing organizations, consulting firms, test laboratories, not-for-profit research organizations and educational institutions with no financial interest in the matters under consideration. The term includes only those organizations which are not owned or controlled by any client, industrial organization, or any other institution with a financial interest in the matter under consideration.

"Integral secondary containment" means a secondary containment system manufactured as part of the underground storage tank.

"Interstitial space" means the space between the primary and secondary containment systems.

"Leak threshold" means the value against which test measurements are compared and which serves as the basis for declaring the presence of a leak. The leak threshold is set by the manufacturer in order to meet state and federal requirements. Leak threshold is not an allowable leak rate.

"Liquid asphalt tank" means an underground storage tank which contains steam-refined asphalts.

"Liquefied petroleum gas tank" means an underground storage tank which contains normal butane, isobutane, propane, or butylene (including isomers) or mixtures composed predominantly thereof in a liquid or gaseous state having a vapor pressure in excess of 40 pounds per square inch absolute at a temperature of 100 degrees Fahrenheit.

"Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing hazardous substances.

"Manufacturer" means any business which produces any item discussed in these regulations.

"Manual inventory reconciliation" means a procedure for determining whether an underground tank system is leaking based on bookkeeping calculations, using measured throughput and a series of daily inventory records taken manually by the tank owner or operator or recorded electronically. This term does not include procedures which are based on statistical inventory reconciliation.

"Membrane liner" means any membrane sheet material used in a secondary containment system. A membrane liner shall be compatible with the substance stored.

"Membrane liner fabricator" means any company which converts a membrane liner into a system for secondary containment.

"Membrane manufacturer" means any company which processes the constituent polymers into membrane sheeting from which the membrane liner is fabricated into a system for secondary containment.

"Motor vehicle" means a self-propelled device by which any person or property may be propelled, moved, or drawn.

"Motor vehicle fuel tank" means an underground storage tank that contains a petroleum product. The definition does not include underground storage tanks that contain used oil.

"New underground storage tank" means an underground storage tank which is not an existing underground storage tank.

"Non-volumetric test" means a tank integrity test method that ascertains the physical integrity of an underground storage tank through review and consideration of circumstances and physical phenomena internal or external to the tank.

"Operational life" means the period beginning when installation of the tank system has begun until the time the tank system should be properly closed.

"Operator" means any person in control of, or having responsibility for, the daily operation of an underground storage tank system.

"Person", as defined in Chapter 6.7 of Division 20 of the Health and Safety Code includes any entity defined as a person under the Federal Act.

"Perennial ground water" means ground water that is present throughout the year.

"Petroleum" means petroleum including crude oil, or any fraction thereof, which is liquid at standard conditions of temperature and pressure, which means at 60 degrees Fahrenheit and 14.7 pounds per square inch absolute.

"Pipeline leak detector" means a continuous monitoring system for underground piping capable of detecting at any pressure, a leak rate equivalent to a specified leak rate and pressure, with a probability of detection of 95 percent or greater and a probability of false alarm of 5 percent or less.

"Probability of detection" means the likelihood, expressed as a percentage, that a test method will correctly identify a leaking underground storage tank.

"Probability of false alarm" means the likelihood, expressed as a percentage, that a test method will incorrectly identify a "tight" tank as a leaking underground storage tank.

"Qualitative release detection method" means a method which detects the presence of a hazardous substance or suitable tracer outside the underground storage tank being tested.

"Quantitative release detection method" means a method which determines the integrity of an underground storage tank by measuring a release rate or by determining if a release exceeds a specific rate.

"Release detection method or system" means a method or system used to determine whether a release of a hazardous substance has occurred from an underground tank system into the environment or into the interstitial space between an underground tank system and its secondary containment.

"Repair" means to restore a tank or underground storage tank system component that has caused a release of a hazardous substance from the underground storage tank system.

"Septic tank" means a tank designed and used to receive and process biological waste and sewage.

"Statistical inventory reconciliation" means a procedure to determine whether a tank is leaking based on the statistical analysis of measured throughput and a series of daily inventory records taken manually by the tank owner or operator or recorded electronically.

"Statistical inventory reconciliation provider" means the developer of a statistical inventory reconciliation method that meets federal and state standards as evidenced by a third-party evaluation conducted according to section 2643(f), or an entity that has been trained and certified by the developer of the method to be used. In either case, the provider shall have no direct or indirect financial interest in the underground storage tank being monitored.

"Storm water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

"Substantially beneath the surface of the ground" means that at least 10 percent of the underground tank system volume, including the volume of any connected piping, is below the ground surface or enclosed below earthen materials.

"Sump," "pit," "pond," or "lagoon" means a depression in the ground which lacks independent structural integrity and depends on surrounding earthen material for structural support of fluid containment.

"Tank integrity test" means a test method that can ascertain the physical integrity of an underground storage tank. The term includes only test methods which are able to detect a leak of 0.1 gallons per hour with a probability of detection of at least 95 percent and a probability of false alarm of 5 percent or less. The test method may be either volumetric or non-volumetric in nature. A leak rate is reported using a volumetric test method, whereas, a non-volumetric test method reports whether a substance or physical phenomenon is detected which may indicate the presence of a leak.

"Unauthorized release" as defined in Chapter 6.7 of Division 20 of the Health and Safety Code does not include intentional withdrawals of hazardous substances for the purpose of legitimate sale, use, or disposal.

"Under-Dispenser Containment" means secondary containment that is located under a dispenser.

"Under-Dispenser spill containment or control system" means a device that is capable of preventing an unauthorized release from under the dispenser from entering the soil or groundwater or both.

"Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, secondary containment, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of hazardous substances.

"Upgrade compliance certificate" includes a numbered decal, file copy of the decal, and plastic fill pipe tag as described in Section 2712.1 of these regulations.

"Volumetric test" means a tank integrity test method that ascertains the physical integrity of an underground storage tank through review and comparison of tank volume.

"Voluntary consensus standards" means standards that shall be developed after all persons with a direct and material interest have had a right to express a viewpoint and, if dissatisfied, to appeal at any point (a partial list of the organizations that adopt voluntary consensus standards are shown in Appendix I, Table B).

"Wastewater treatment tank" means a tank designed to treat influent wastewater through physical, chemical, or biological methods and which is located inside a public or private wastewater treatment facility. The term includes untreated wastewater holding tanks, oil water separators, clarifiers, sludge holding tanks, filtration tanks, and clarified water tanks that do not continuously contain hazardous substances.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25282, 25283, 25284, 25284.1, 25292.3 and 25299.5(a), Health and Safety Code; 40 CFR 280.10 and 280.12.

Amend Title 23, Division 3, Chapter 16, Article 3, existing sections 2630, 2631, 2635, and 2636 of the California Code of Regulations to read as follows:

2630. General Applicability of Article

- (a) The requirements in this article apply to owners of new underground storage tanks. ~~Underground storage tanks installed after January 1, 1984, may be deemed to be in compliance with the requirements in this article if they were installed in accordance with federal and state requirements that existed at the time of installation. However~~ In addition, the applicable repair and upgrade requirements in Article 6 shall be complied with.
- (b) Sections 2631 and 2632 specify design, construction, and monitoring requirements for all new underground storage tanks. Sections 2633 and 2634 specify alternate design, construction, and monitoring requirements, in lieu of those specified in sections 2631 and 2632, for underground storage tanks installed before January 1, 1997 which store only motor vehicle fuel. ~~New Underground storage tanks which store only motor vehicle fuels may be constructed and monitored pursuant to the requirements specified in sections 2633 and 2634 in lieu of those specified in sections 2631 and 2632. However, if the tank is constructed according to requirements in section 2633 the monitoring requirements of section 2634 shall also be met. shall be monitored in accordance with section 2634.~~
- (c) All new underground storage tanks, piping, and secondary containment systems shall comply with sections 2635 and 2636.
- (d) All monitoring equipment used to satisfy the requirements of this article sections 2632, 2634, and 2636 shall meet the requirements of section 2643(f) and shall be installed and maintained such that the equipment is capable of detecting a leak at the earliest possible opportunity. Additionally, all monitoring equipment used to satisfy the requirements of this article shall be installed, calibrated, operated, and maintained in accordance with section 2637(b). ~~manufacturer's instructions, including routine maintenance and service checks (at least once per calendar year) for operability or running condition. Written records shall be maintained as required in section 2712 of Article 10.~~

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291 and 25292.3, Health and Safety Code; 40 CFR 280.20.

2631. Design and Construction Requirements for New Underground Storage Tanks

- (a) All new underground storage tanks including associated piping used for the storage of hazardous substances shall have primary and secondary of containment. Primary containment shall be product-tight. Secondary containment may be manufactured as an integral part of the primary containment or it may be constructed as a separate containment system. Secondary containment systems shall be designed and constructed such that the secondary containment system can be periodically tested in accordance with section 2637(a).

- (b) The design and construction of all primary containment including any integral secondary containment system, shall be approved by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards. All other components used to construct the primary containment system, such as special accessories, fittings, coatings or linings, monitoring systems and level controls used to form the underground storage tank system shall also be approved by an independent testing organization. This requirement became effective on July 1, 1991 for underground storage tanks; January 1, 1992 for piping; and shall be effective on January 1, 1995 for all other components. The exterior surface of underground storage tanks shall bear a marking, code stamp, or label showing the following minimum information:
- (1) Engineering standard used;
 - (2) Nominal diameter in feet;
 - (3) Nominal capacity in gallons;
 - (4) Degree of secondary containment;
 - (5) Useable capacity in gallons;
 - (6) Design pressure in psig;
 - (7) Maximum operating temperature in degrees Fahrenheit;
 - (8) Construction materials;
 - (9) Year manufactured; and
 - (10) Identity of manufacturer.
- (c) A primary containment system with or without an integral secondary containment system shall have wear plates (striker plates) installed, center to center, below all accessible openings. The plates shall be made of steel or other appropriate material if steel is not compatible with the hazardous substance stored. The width of the plate shall be at least eight inches on each side, or shall be equal to the area of the accessible opening or guide tube, whichever is larger. The thickness of the steel plate shall be at least 1/8 inch and those made of other materials shall be of sufficient thickness to provide equivalent protection. The plate, if under 1/4 inch thick, shall be rolled to the contours of the underground storage tank and all plates shall be bonded or tack welded in place. A drop tube-mounted bottom protector may fulfill this requirement.
- (d) A secondary containment system which is not an integral part of primary containment shall be designed and constructed according to an engineering specification approved by a state registered professional engineer or according to a nationally recognized industry code or engineering standard. The engineering specification shall include the construction procedures. Materials used to construct the secondary containment system shall have sufficient thickness, density, and corrosion resistance to prevent structural weakening or damage to the secondary containment system as a result of contact with any released hazardous substance. The following requirements apply to these secondary containment systems:
- (1) The secondary containment system shall be constructed to contain at least the following volumes:
 - (A) One hundred percent of the usable capacity of the primary containment system where only one primary container is within the secondary containment system.

- (B) In the case of multiple primary containers within a single secondary containment system, the secondary containment system shall be large enough to contain 150 percent of the volume of the largest primary container within it, or 10 percent of the aggregate internal volume of all primary containers within the secondary containment system, whichever is greater. When all primary containers are completely enclosed within the secondary containment system, the restrictions of this subsection do not apply.
- (2) If the secondary containment system is open to rainfall, it shall be constructed to accommodate the volume of precipitation which could enter the secondary containment system during a 24-hour, 25-year storm in addition to the volume specified in subsection (d)(1).
- (3) If backfill material is placed in the secondary containment system, the volumetric requirements for the pore space shall be equal to the requirement in subsection (d)(1). The available pore space in the secondary containment system backfill shall be determined using standard engineering methods and safety factors. The specific retention and specific yield of the backfill material, the location of any primary container within the secondary containment, and the proposed method of operation for the secondary containment system shall be considered in determining the available pore space.
- (4) The secondary containment system shall be equipped with a collection system to accumulate, temporarily store, and permit removal of any liquid within the system.
- (5) The floor of the secondary containment system shall be constructed on a firm base and, if necessary for monitoring, shall be sloped to a collection sump. One or more access casings shall be installed in the sump and sized to allow removal of collected liquid. The access casing shall extend to the ground surface, be perforated in the region of the sump, and be covered with a locked waterproof cap or enclosed in a surface security structure that will protect the access casing(s) from entry of surface water, accidental damage, unauthorized access, and vandalism. A facility with locked gates will satisfy the requirements for protection against unauthorized access and vandalism. The casing shall have sufficient thickness to withstand all anticipated stresses with appropriate engineering safety factors and constructed of materials that will not be structurally weakened by the stored hazardous substance and will not donate, capture, or mask constituents for which analyses will be made.
- (6) Secondary containment systems utilizing using membrane liners shall be approved by an independent testing organization in accordance with industry codes, voluntary consensus standards, or engineering standards. A membrane liner shall contain no primary nutrients or food-like substances attractive to rodents and shall meet the requirements in Table 3.1 after a 30-day immersion in the stored hazardous substance.
- (7) A membrane liner, if used, shall be installed under the direct supervision of a representative of the membrane liner fabricator or a contractor certified by the fabricator.

- (8) The excavation base and walls for a membrane liner shall be prepared to the membrane liner fabricator's specifications and shall be firm, smooth, and free of any sharp objects or protrusions.
- (9) The site shall be assessed to ensure that the secondary containment is always above the ground water and not in a 25-year flood plain, unless the containment and monitoring designs are for use under such conditions.
- (e) Laminated, coated, or clad materials shall be considered a single wall and do not fulfill the requirements of both primary and secondary containment.
- (f) Underground storage tanks with integral secondary containment systems, which satisfy the construction requirements of subsection (b), fulfill the volumetric requirements for secondary containment specified in subsection (d)(1).
- (g) Underground storage tanks with secondary containment systems shall be designed and installed so that any loss of a hazardous substance from the primary containment will be detected by an interstitial monitoring device or method.
- (h) An underground storage tank which contains motor vehicle fuel and which is designed with an integral secondary containment system shall provide 100 percent secondary containment unless it is equipped with the overfill prevention system in accordance with section 2635(b)(2)(C). In this case, the top portion of the tank, no greater than two feet wide along the length of the tank, may be single-walled.
- (i) Tanks designed and constructed pursuant to the provisions of this section shall be monitored according to the provisions of section 2632.

Authority cited: Sections 25299.3 and 25299.7 Health and Safety Code.

Reference: Sections 25281, 25284.1 and 25291, Health and Safety Code; 40 CFR 280.20.

2635. Installation and Testing Requirements for All New Underground Storage Tanks

- (a) Primary and secondary containment systems shall be designed, constructed, tested, and certified to comply, as applicable, with all of the following requirements:
 - (1) All underground storage tanks shall be tested at the factory before being transported. The tests shall determine whether the tanks were constructed in accordance with the applicable sections of the industry code or engineering standard under which they were built.
 - (2) The outer surface of underground storage tanks constructed of steel shall be protected from corrosion as follows, except that primary containment systems installed in a secondary containment system and not backfilled do not need cathodic protection:

- (A) Field-installed cathodic protection systems shall be designed and certified as adequate by a corrosion specialist. The cathodic protection systems shall be tested by a cathodic protection tester within six months of installation and at least every three years thereafter. The criteria that are used to determine that cathodic protection is adequate as required by this section shall be in accordance with a code of practice developed in accordance with voluntary consensus standards. Impressed-current cathodic protection systems shall also be inspected no less than every 60 calendar days to ensure that they are in proper working order.
 - (B) Underground storage tanks protected with fiberglass-reinforced plastic coatings, composites, or equivalent non-metallic exterior coatings or coverings, including coating/sacrificial anode systems, shall be tested at the installation site using an electric resistance holiday detector. All holidays detected shall be repaired and checked by a factory authorized repair service before installation. During and after installation, care shall be taken to prevent damage to the protective coating or cladding. Preengineered corrosion protection systems with sacrificial anodes shall be checked once every three years in accordance with the manufacturer's instructions.
- (3) Before installation, the tank shall be tested for tightness at the installation site in accordance with the manufacturer's written guidelines. If there are no guidelines, the primary and secondary containment shall be tested for tightness with air pressure at not less than 3 pounds per square-inch (20.68 k Pa) and not more than 5 pounds per square-inch (34.48 k Pa). In lieu of the above, an equivalent differential pressure test, expressed in inches of mercury vacuum, in the interstitial space of the secondary containment, is acceptable. The pressure (or vacuum in the interstitial space) shall be maintained for a minimum of 30 minutes to determine if the tank is tight. If a tank fails the tightness test, as evidenced by soap bubbles, or water droplets, installation shall be suspended until the tank is replaced or repaired by a factory authorized repair service. Following repair or replacement, the tank shall pass a tightness test.
 - (4) All secondary containment systems shall pass a post-installation test which meets the approval of the local agency.
 - (5) After installation, but before the underground storage tank is placed in service, a tank integrity test shall be conducted to ensure that no damage occurred during installation. The tank integrity test is not required if the tank is equipped with an interstitial monitor certified by a third-party evaluator to meet the performance standards of a "tank integrity test" as defined in section 2611, or if the tank is tested using another method deemed by the State Water Resources Control Board to be equivalent.

- (6) All underground storage tanks shall be installed according to a code of practice developed in accordance with voluntary consensus standards and the manufacturer's written installation instructions. The owner or operator shall certify that the underground storage tank was installed in accordance with the above requirements as required by subsection (d) of this section.
- (7) All underground storage tanks subject to flotation shall be anchored using methods specified by the manufacturer or, if none exist, shall be anchored according to the best engineering judgment.
- (b) All underground storage tanks shall be equipped with a spill container and an overfill prevention system as follows:
 - (1) The spill container shall collect any hazardous substances spilled during product delivery operations to prevent the hazardous substance from entering the subsurface environment. The spill container shall meet the following requirements:
 - (A) If it is made of metal, the exterior wall shall be protected from galvanic corrosion.
 - (B) It shall have a minimum capacity of five gallons (19 liters).
 - (C) It shall have a drain valve which allows drainage of the collected spill into the primary container or provide a means to keep the spill container empty.
 - (2) The overfill prevention system shall not allow for manual override and shall meet one of the following requirements:
 - (A) Alert the transfer operator when the tank is 90 percent full by restricting the flow into the tank or triggering an audible and visual alarm; or
 - (B) Restrict delivery of flow to the tank at least 30 minutes before the tank overfills, provided the restriction occurs when the tank is filled to no more than 95 percent of capacity; and activate an audible alarm sounds at least five minutes before the tank overfills; or
 - (C) Provide positive shut-off of flow to the tank when the tank is filled to no more than 95 percent of capacity; or,
 - (D) Provide positive shut-off of flow to the tank so that none of the fittings located on the top of the tank are exposed to product due to overfilling.
 - (3) The local agency may waive the requirement for overfill prevention equipment where the tank inlet exists in an observable area, the spill container is adequate to collect any overfill, and the tank system is filled by transfers of no more than 25 gallons at one time.

- (c) Secondary containment systems including leak interception and detection systems installed pursuant to section 2633 shall comply with all of the following:
- (1) The secondary containment system shall encompass the area within the system of vertical planes surrounding the exterior of the primary containment system. If backfill is placed between the primary and secondary containment systems, an evaluation shall be made of the maximum lateral spread of a point leak from the primary containment system over the vertical distance between the primary and secondary containment systems. The secondary containment system shall extend an additional distance beyond the vertical planes described above equal to the radius of the lateral spread plus one foot.
 - (2) The secondary containment system shall be capable of preventing the inflow of the highest ground water anticipated into the interstitial space during the life of the tank.
 - (3) If the interstitial space is backfilled, the backfill material shall not prevent the vertical movement of leakage from any part of the primary containment system.
 - (4) The secondary containment system with backfill material shall be designed and constructed to promote gravity drainage of an unauthorized release of hazardous substances from any part of the primary containment system to the monitoring location(s).
 - (5) Two or more primary containment systems shall not use the same secondary containment system if the primary containment systems store materials that in combination may cause a fire or explosion, or the production of a flammable, toxic, or poisonous gas, or the deterioration of any part of the primary or secondary containment system.
 - (6) Drainage of liquid from within a secondary containment system shall be controlled in a manner approved by the local agency to prevent hazardous materials from being discharged into the environment. The liquid shall be analyzed to determine the presence of any of the hazardous substance(s) stored in the primary containment system prior to initial removal, and monthly thereafter, for any continuous discharge (removal) to determine the appropriate method for final disposal. The liquid shall be sampled and analyzed immediately upon any indication of an unauthorized release from the primary containment system.
 - (7) For primary containment systems installed completely beneath the ground surface, the original excavation for the secondary containment system shall have a water-tight cover which extends at least one foot beyond each boundary of the original excavation. This cover shall be asphalt, reinforced concrete, or equivalent material which is sloped to drainways leading away from the excavation. Access openings shall be constructed as water-tight as practical.

Primary containment systems with integral secondary containment and open vaults are exempt from the requirements of this subsection.

- (8) The actual location and orientation of the tanks and appurtenant piping systems shall be indicated on as-built drawings of the facility. Copies of all drawings, photographs, and plans shall be submitted to the local agency for approval.
- (d) Owners or their agents shall certify that the installation of the tanks and piping meets the conditions in subdivisions (1) through (5) below. The certification shall be made on a "Certificate of Compliance for Underground Storage Tank Installation Form C" (see Appendix V).
 - (1) The installer has been adequately trained as evidenced by a certificate of training issued by the tank and piping manufacturers. On and after July 1, 2001, this certification shall be renewed by completion of refresher training provided by the manufacturer. Additionally, this certification shall be renewed at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.
 - (2) The installer has been certified or licensed by the Contractors State License Board;
 - (3) The underground storage tank, any primary piping, and any secondary containment, was installed according to applicable voluntary consensus standards and any manufacturer's written installation instructions;
 - (4) All work listed in the manufacturer's installation checklist has been completed; and
 - (5) The installation has been inspected and approved by the local agency, or, if required by the local agency, inspected and certified by a registered professional engineer who has education in and experience with underground storage tank system installation.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291 and 25299, Health and Safety Code; 40 CFR 280.40 - 280.45.

2636. Design, Construction, Installation, Testing, and Monitoring Requirements for Piping.

- (a) Except as provided below, piping connected to tanks which were installed after July 1, 1987, shall have secondary containment that complies with the requirements of section 2631 for new underground storage tanks. This requirement does not apply to piping described as follows:

- (1) vent or tank riser piping, provided the primary containment system is equipped with an overfill prevention system meeting the requirements specified in sections 2635(b)(2)(B) or (C); or,
 - (2) vapor recovery piping if designed so that it cannot contain liquid-phase product; or,
 - (3) suction piping if the piping is designed, constructed, and installed as follows:
 - (A) The below-grade piping operates at less than atmospheric pressure (suction piping);
 - (B) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released (gravity-flow piping);
 - (C) No valves or pumps are installed below grade in the suction line. Only one check valve is located directly below and as close as practical to the suction pump;
 - (D) An inspection method is provided which readily demonstrates compliance with subdivisions (A) through (C) above.
- (b) All corrodible underground piping, if in direct contact with backfill material, shall be protected against corrosion. Piping constructed of fiberglass-reinforced plastic, steel with cathodic protection, or steel isolated from direct contact with backfill, fulfills this corrosion protection requirement. Cathodic protection shall meet the requirements of section 2635(a)(2).
- (c) Underground primary piping shall meet all of the following requirements:
- (1) Primary piping in contact with hazardous substances under normal operating conditions shall be installed inside a secondary containment system which may be a secondary pipe, vault, or a lined trench. All secondary containment systems shall be sloped so that all releases will flow to a collection sump located at the low point of the underground piping.
 - (2) Primary piping and secondary containment systems shall be installed in accordance with an industry code of practice developed in accordance with voluntary consensus standards. The owner or operator shall certify that the piping was installed in accordance with the above requirements of section 2635(d). The certification shall be made on the "Certification of Compliance for Underground Storage Tank Installation Form C" (see Appendix V).

- (d) Lined trench systems used as part of a secondary containment system shall be designed and constructed according to a code of practice or engineering standard approved by a state registered professional engineer. The following requirements shall also apply:
- (1) All trench materials shall be compatible with the substance stored and evaluated by an independent testing organization for their compatibility or adequacy of the trench design, construction, and application.
 - (2) The trench shall be covered and capable of supporting any expected vehicular traffic.
- (e) All new primary piping and secondary containment systems shall be tested for tightness after installation in accordance with manufacturer's guidelines. Primary pressurized piping shall be tested for tightness hydrostatically at 150 percent of design operating pressure or pneumatically at 110 percent of design operating pressure. If the calculated test pressure for pressurized piping is less than 40 psi, 40 psi shall be used as the test pressure. The pressure shall be maintained for a minimum of 30 minutes and all joints shall be soap tested. A failed test, as evidenced by the presence of bubbles, shall require appropriate repairs and retesting. If there are no manufacturer's guidelines, secondary containment systems shall be tested using an applicable method specified in an industry code or engineering standard. Suction piping and gravity flow piping which cannot be isolated from the tank shall be tested after installation in conjunction with an overfilled volumetric tank integrity test, or other test method meeting the requirements of section 2643(f), if approved by the local agency.
- (f) Underground piping with secondary containment, including under-dispenser piping with secondary containment, shall be equipped and monitored with monitoring systems as follows:
- (1) ~~All~~ The secondary containment, including under-dispenser containment, and under-dispenser spill control or containment systems, system shall be equipped with a continuous monitoring system that either activates ~~which meets the requirements of section 2643(f) and which is connected to~~ an audible and visual alarm ~~system or stops the flow of product at the dispenser when it detects a leak.~~
 - (2) Automatic line leak detectors shall be installed on underground pressurized piping and shall be capable of detecting a 3-gallon per hour leak rate at 10 psi within 1 hour with a probability of detection of at least 95 percent and a probability of false alarm no greater than 5 percent. ~~Compliance with these standards shall be certified in accordance with section 2643(f) of Article 4.~~
 - (3) Other monitoring methods may be used in lieu of the requirement in subdivision (2) if it is demonstrated to the satisfaction of the local agency that the alternate method is as effective as the methods otherwise required by this section. ~~A~~ Continuous monitoring systems as described in subdivision (1), which shuts down the pump in addition to either activating the audible and visual alarm

~~system or stopping the flow of product at the dispenser,~~ satisfies the automatic line leak detector requirement of subdivision (2).

- (4) Monitoring shall be conducted on all underground pressurized piping with secondary containment at least annually at a pressure designated by the equipment manufacturer, provided that the method is capable of detecting a minimum release equivalent to 0.1 gallon per hour defined at 150 percent of the normal operating pressure of the product piping system at the test pressure with at least a 95 percent probability of detection and not more than a 5 percent probability of false alarm. This requirement is waived if the criteria in subsection (g) of this section are met.
- (g) Underground pressurized piping which meets all of the following requirements satisfies the annual tightness test requirement specified in subsection (f)(4):
 - (1) ~~All The~~ secondary containment systems ~~is~~ are equipped with a continuous monitoring systems. The leak detection device may be located at the pump sump ~~for sections of~~ if the piping that slopes back to this point.
 - (2) ~~All A~~ continuous monitoring systems ~~is~~ for the piping are connected to ~~an audible and visual alarm system and~~ the pumping system.
 - (3) ~~All A~~ continuous monitoring systems for the piping shuts down the pump and ~~either activates an audible and visual the alarm system or stop the flow of product at the dispenser when they detect a leak a release is detected.~~
 - (4) The pumping system shuts down automatically if any of the continuous monitoring systems for the piping fail or ~~are~~ is disconnected.
 - (5) The requirements of subdivisions (3) and (4) do not apply to an emergency generator, provided the monitoring system is checked at least daily.
- (h) Under-dispenser containment shall be designed, constructed, and installed in accordance with the following:
 - (1) Owners or Operators of a UST system shall have the system fitted with under-dispenser containment, or an approved under-dispenser spill containment or control system according to the following schedule:
 - (A) At the time of installation for systems installed after January 1, 2000.
 - (B) By July 1, 2001, for systems installed after July 1, 1987 that are located within 1,000 feet of a public drinking water well, as identified pursuant to the state Geographic Information System mapping database.
 - (C) By December 31, 2003, for systems not subject to subsection 2636(h)(1)(A) or (B).

- (2) Under-dispenser containment shall be designed, constructed, installed, and monitored in accordance with section 2631, 2636(c)(2), 2636(e), and 2636(f).
- (3) A manufacturer of an under-dispenser spill containment or control system may apply to the Division of Clean Water Programs Underground Storage Tank Program Manager for approval of the system. Owners or operators shall not install an under-dispenser spill containment or control system that has not been approved.
 - (A) Applications for approval shall be submitted in writing and include the following:
 - (i) A description of the proposed system.
 - (ii) Clear and convincing evidence that the system will protect the soil and beneficial uses of the waters of the state from unauthorized releases.
 - (B) The Program Manager shall review the application to determine if the proposed system adequately protects the soil and beneficial uses of groundwater before determining whether to approve the proposed system.
 - (C) The Program Manager may modify or revoke a previously issued approval if it finds that, based on new evidence, the approved system does not adequately protect the soil and beneficial uses of groundwater from unauthorized releases.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291 and 25299, Health and Safety Code; 40 CFR 280.20, 280.40-280.45.

Amend Title 23, Division 3, Chapter 16, Article 3, to add new sections 2636.1, 2636.2, 2636.3, 2636.4 and 2637 of the California Code of Regulations as follows:

2636.1. Final Division Decisions Regarding Under-Dispenser Spill Containment or Control Systems

- (a) A manufacturer of an under-dispenser spill containment or control system who disagrees with a determination by the Program Manager not to approve the manufacturer's system under section 2636(h)(3)(B) or to modify or revoke a previously issued approval of the manufacturer's system under section 2636(h)(3)(C) may ask for a review by the Division Chief.
- (b) An appeal to the Division Chief must be in writing and must be accompanied by all material that the manufacturer wishes to be considered by the Division Chief, and by the Board in any subsequent review by the Board. The appeal must contain an explanation

why the manufacturer believes the Program Manager's determination is erroneous, inappropriate, or improper.

- (c) The Division Chief shall render a Final Division Decision within 30 days of receipt of the appeal. A Final Division Decision is final and conclusive unless the manufacturer files a petition for review with the Board that is received by the Board within 30 days from the date of the Final Division Decision.
- (d) The Division Chief may at any time, on the Division Chief's own motion, issue a Final Division Decision.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25284.1, Health and Safety Code.

2636.2. Petition for Board Review Regarding Under-Dispenser Spill Containment or Control Systems

- (a) A manufacturer may petition the Board for review of a Final Division Decision.
- (b) A petition for Board review shall contain the following:
 - (1) The name and address of the petitioner;
 - (2) A statement of the date on which the petitioner received the Division's final decision;
 - (3) A copy of the Final Division Decision that the Board is requested to review;
 - (4) An explanation why the petitioner believes the Final Division Decision is erroneous, inappropriate, or improper;
 - (5) A statement describing how the petitioner is damaged by the Final Division Decision; and
 - (6) A description of the remedy or outcome desired.
- (c) The petition shall be sent to the Board Chairperson, with copies sent to the Chief Counsel of the Board, and the Division Chief.
- (d) The petitioner may request a hearing for the purpose of presenting factual material not presented to the Division Chief or for oral argument or both. The request to present material that was not presented to the Division Chief must include a description of the factual material that the petitioner wishes to submit, the facts that the petitioner expects to establish, and an explanation of the reasons why the petitioner could not previously submit the new material to the Division Chief. The petitioner must include with the

petition a copy of any new documentary material that the petitioner wishes to present to the Board.

- (e) The Division Chief may file a response to the petition with the Board within 30 days of the Board's notification to the petitioner that the petition is complete. The Division must provide a copy of any response to the petitioner. The Board may extend the time for filing a response by the Division Chief.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25284.1, Health and Safety Code.

2636.3. Defective Petitions

Upon the Board's receipt of a petition which does not comply with section 2636.2 of this chapter, the Board, through its Chief Counsel, will advise the petitioner of the manner in which the petition is defective and allow a reasonable time within which an amended petition may be filed. If the Board does not receive a properly amended petition within the time allowed, the petition shall be dismissed.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25284.1, Health and Safety Code.

2636.4. Action by the Board Regarding Under-dispenser Spill Containment or Control Systems

- (a) In response to the petition, the Board may:

 - (1) Refuse to review the petition if it is late or fails to raise substantial issues that are appropriate for Board review;
 - (2) Affirm the final decision that the Board has been requested to review;
 - (3) Set aside or modify the final decision that the Board has been requested to review;
or
 - (4) Take such other action as the Board deems appropriate.
- (b) Before taking action, the Board may, at its discretion, hold a hearing, or provide for an informal meeting between the petitioner, the Division Chief, a member of the Board, and such other persons as the Board deems appropriate for the purpose of attempting to resolve the dispute.
- (c) If an evidentiary hearing is held, it shall be conducted in accordance with the California Code of Regulations, title 23, division 3, Chapter 1.5, article 2.
- (d) The Board reserves the right, at its discretion, to consider a petition upon its own motion.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25284.1, Health and Safety Code.

2637. Secondary Containment Testing and Annual Maintenance Certification

(a) Secondary containment systems installed on or after January 1, 2001 shall be tested upon installation, 6 months after installation, and every 36 months thereafter. Secondary containment systems installed prior to January 1, 2001 shall be tested by January 1, 2003 and every 36 months thereafter. Secondary containment testing shall be conducted as follows:

(1) By December 31, 2002, the owner or operator of any secondary containment system that the owner or operator determines cannot be tested in accordance with this section shall replace the secondary containment system with a system that can be tested in accordance with this section. As an alternative, the owner or operator may submit a proposal and workplan for enhanced leak detection to the local agency in accordance with subdivisions 2644.1 (a)(1), (2), (4), and (5) by July 1, 2002; complete the program of enhanced leak detection by December 31, 2002; and replace the secondary containment system with a system that can be tested in accordance with this section by July 1, 2005. The local agency shall review the proposed program of enhanced leak detection within 45 days of submittal or re-submittal..

(2) Periodic testing of secondary containment systems shall be conducted using a test procedure that demonstrates that the system performs at least as well as it did upon installation. For example, if the secondary containment system was tested upon installation by using a test method that applied a pressure of 5 psi, then the periodic test must be conducted using a method that tests the system at an equivalent pressure. These tests shall be performed in accordance with manufacturer's guidelines or standards. If there are no manufacturer's guidelines or standards, secondary containment systems must be tested using an applicable method specified in an industry code or engineering standard. If there are no applicable manufacturers guidelines, industry codes, or engineering standards a test method approved by a state registered professional engineer shall be used.

(3) Secondary containment testing shall be performed by either a licensed tank tester, licensed tank installer, or any person meeting the requirements of subsection 2637 (b)(1).

(4) Underground storage tank owners and operators shall submit a copy of the test report to the local agency within 30 days of the completion of the test.

(5) Owners and operators of underground storage tanks must notify the local agency at least 48 hours prior to conducting the test, unless this notification requirement is waived by the local agency.

(6) Secondary containment systems where the continuous monitoring automatically monitors both primary and secondary containment, such as systems that are hydrostatically

monitored or under constant vacuum, are exempt from periodic secondary containment testing.

- (b) All monitoring equipment used to satisfy the requirements of this article shall be installed, calibrated, operated and maintained in accordance with manufacturer's instructions, and certified every 12 months for operability, proper operating condition, and proper calibration. Written records shall be maintained as required in section 2712. On or after January 1, 2002 the following shall also apply:
- (1) Persons performing installation, repair, maintenance, calibration, or annual certification of monitoring equipment shall meet the following requirements:
 - (A) Possess a current Class "A" General Engineering Contractor License, C-10 Electrical Contractor License, C-34 Pipeline Contractor License, C-36 Plumbing Contractor License, or C-61 (D40) Limited Specialty Service Station Equipment and Maintenance Contractor License issued by the Contractors State License Board.
 - (B) Be trained and certified by the manufacturer of the monitoring equipment; and,
 - (C) Be re-certified by the manufacturer by completion of a manufacturer's refresher course. Additionally, this certification shall be renewed at the time interval recommended by the manufacturer, or every 36 months, whichever is shorter.
 - (2) Individuals employed by persons performing installation, repair, maintenance, calibration, or annual certification of monitoring equipment for the purpose of conducting this work shall meet the requirements of 2637(b)(1)(B) and (C).
 - (3) Annual monitoring equipment certification shall be made on a "Monitoring System Certification" form (see Appendix VI).
 - (4) UST owners and operators shall submit a completed "Monitoring System Certification" form to the local agency within 30 days after completion of the inspection.
 - (5) The UST owner or operator shall notify the local agency at least 48 hours prior to conducting the installation, repair, replacement, calibration, or certification of monitoring equipment unless the notification requirement is waived by the local agency
 - (6) A person conducting UST monitoring equipment certification shall affix a tag/sticker on each monitoring equipment component that is being certified, repaired, or replaced. The tag/sticker shall be placed in a readily visible location and shall include the date the UST component was certified, repaired, or replaced, and the contractors license number.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25281, 25284.1, 25291 and 25292, Health and Safety Code; 40 CFR 280.41.

Amend Title 23, Division 3, Chapter 16, Article 4, sections 2640 and 2641 of the California Code of Regulations to read as follows:

2640. General Applicability of Article

- (a) The requirements of this article apply to owners or operators of existing underground storage tanks.
- (b) The requirements of this article apply during the following periods:
 - (1) Any operating period, including any period during which the tank is empty as a result of withdrawal of all stored substances before input of additional hazardous substances;
 - (2) Any period during which hazardous substances are stored in the tank, and no filling or withdrawal is conducted; and
 - (3) Any period between cessation of the storage of hazardous substances and the actual completion of closure, pursuant to Article 7, unless otherwise specified by the local agency, pursuant to section 2671(b), during a temporary closure period.
- (c) This article shall not apply to underground storage tanks that are designed, constructed, installed, and monitored in accordance with ~~sections 2631 and 2632 or 2633 and 2634~~ of Article 3.
- (d) Owners or operators of tanks monitored pursuant to section 25292(b)(5)(A) of the Health and Safety Code shall comply with the requirements of section 2645. Tank systems having a capacity of more than 2,000 gallons shall not be monitored pursuant to section 25292(b)(5)(A) of the Health and Safety Code.
- (e) An owner or operator of an underground storage tank system with a single-walled component that is located within 1,000 feet of a public drinking water well , as notified by the board according to its Geographic Information System mapping database, shall implement a program of enhanced leak detection or monitoring for that tank system in accordance with section 2644.1. Additionally, the following conditions for enhanced leak detection shall apply:
 - (1) For the purpose of section 2644.1, vent or tank riser piping, vapor recovery piping, and suction piping that meet the definitions of section 2636(a)(1), (2), or (3), are not considered single-walled components.
 - (2) Owners or operators notified by the board who believe that their facility is not subject to this requirement may request reconsideration by the Division of Clean Water Programs Underground Storage Tank Program Manager. The request shall be in writing and received by the Underground Storage Tank Program Manager

within 60 calendar days of the date the notification was mailed. The Program Manager shall make a decision on the request, and notify the applicable local agency of this decision, within 90 calendar days of receipt of the request.

- (3) The request for reconsideration must include the name and address of the subject facility, the name and address of the owner or operator submitting the request, and the reason(s) why the requester believes the board notification was in error. If the request is based on evidence that the UST system in question is greater than 1,000 feet from a public drinking water well, the request shall include a demonstration that the center of the well head is more than 1,000 ft from the closest component of the UST system. If the request is based on evidence that the subject UST system does not have a single-walled component, the request shall include supporting documentation. A copy of the request shall be concurrently submitted to the local agency.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25292 and 25292.4, Health and Safety Code; 40 CFR 280.40, 280.42 and 280.43(b).

2641. Monitoring Program Requirements

- (a) Owners or operators of existing underground storage tanks subject to this article shall implement a monitoring program which is capable of detecting an unauthorized release from any portion of the underground storage tank system at the earliest possible opportunity.
- (b) Underground piping shall be exempt from monitoring requirements if the local agency determines that the piping has been designed and constructed in accordance with section 2636(a)(3).
- (c) All underground piping that operates at less than atmospheric pressure, unless it is exempt from monitoring under subsection (b), shall comply with the monitoring requirements of section 2643(d) and shall also include daily monitoring as described in Appendix II.
- (d) All portions of the underground storage tank system shall be visually monitored in accordance with section 2642. A portion of the underground storage tank shall be exempt from visual monitoring if the owner demonstrates to the satisfaction of the local agency that one or more of the following conditions apply to that portion:
 - (1) It is not accessible for direct viewing;
 - (2) Visual inspection would be hazardous or would require the use of extraordinary personal protection equipment other than normal protective equipment such as steel-toed shoes, hard hat, or ear protection; or
 - (3) The underground storage tank is located at a facility which is not staffed on a daily basis.

- (e) Non-visual monitoring shall be implemented for all portions of the underground storage tank which are exempt under subsection (d) and, for the underground storage tank, during periods when visual monitoring required under subsection (d) is not conducted. This non-visual monitoring shall include a quantitative release detection method as specified in section 2643 or a qualitative release detection method as specified in section 2644 or a combination of these methods as approved by the local agency.
- (f) Non-visual monitoring for underground pressurized piping shall include a quantitative release detection method that complies with the performance requirements in section 2643(c)(1).
- (g) The monitoring program shall be approved by the local agency and shall be in compliance with the requirements of this article and with the underground storage tank operating permit. The local agency may require additional monitoring methods specified in the operating permit or more frequent monitoring as necessary to satisfy the objective in subsection (a). In deciding whether to approve a proposed monitoring program, or to require additional methods or more frequent monitoring, the local agency shall consider the following factors:
 - (1) The volume and physical and chemical characteristics of the hazardous substance(s) stored in the underground storage tank;
 - (2) The compatibility of the stored hazardous substance(s) and any chemical-reaction product(s) with the function of monitoring equipment or devices;
 - (3) The reliability and consistency of the proposed monitoring equipment and systems under site-specific conditions;
 - (4) The depth and quantity of ground water and the direction of ground water flow;
 - (5) The patterns of precipitation in the region and any ground water recharge which occurs as a result of precipitation;
 - (6) The existing quality of ground water in the area, including other sources of contamination and their cumulative impacts;
 - (7) The current and potential future uses (e.g., domestic, municipal, agricultural, industrial supply) of ground water in the area;
 - (8) The proximity and withdrawal rates of ground water users in the area;
 - (9) The type, homogeneity, and range of moisture content of the backfill material and native soils and their probable effects on contaminant migration and detection;
 - (10) The presence of contamination in the excavation zone or surrounding soils;
 - (11) The proximity of the underground storage tank to surface waters; and

- (12) Additional hydrogeologic characteristics of the zone surrounding the underground storage tank.
- (h) The monitoring program shall include written monitoring procedures and a response plan as set forth in section 2632(d).
- (i) If the local agency does not approve the monitoring program, the owner or operator shall replace, repair, upgrade, or close the tank in accordance with the applicable provisions of this chapter and local agency approval.
- (j) Equipment and devices used to monitor underground storage tanks shall be installed, calibrated, operated, and maintained in accordance with section 2637(b), manufacturer's instructions, including routine maintenance and service checks (at least once per calendar year) for operability or running condition. ~~Written records shall be maintained as required in section 2712 of Article 10.~~
- (k) When an unauthorized release is indicated during the installation of a release detection system, the owner or operator shall comply with the release reporting requirements of Article 5 and, if the release came from the existing tank, shall cease the installation process until the tank system is replaced, repaired, upgraded, or closed in accordance with the applicable provisions of this chapter.
- (l) When implementation of the monitoring program, or any condition, indicates that an unauthorized release may have occurred, the owner or operator shall comply with the release reporting requirements of Article 5 and shall replace, repair, or close the underground storage tank in accordance with the applicable provisions of this chapter.

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25283, 25284.1, 25291 and 25292 Health and Safety Code; 40 CFR 280.40 and 280.41.

Amend Title 23, Division 3, Chapter 16, Article 4, to add new section 2644.1 of the California Code of Regulations as follows:

2644.1 Enhanced Leak Detection

- (a) An owner or operator who is required, pursuant to section 2640(e), to implement a program of enhanced leak detection or monitoring shall comply with the requirements of this section as follows:
- (1) Enhanced leak detection means a test method that ascertains the integrity of an underground tank system by introduction, and external detection, of a substance that is not a component of the fuel formulation that is stored in the tank system.
- (2) The enhanced leak detection test method shall be third party certified, in accordance with section 2643(f), for the capability of detecting both vapor and

liquid phase releases from the underground storage tank system. The enhanced leak detection test method shall be capable of detecting a leak rate of at least 0.005 gph, with a probability of detection of at least 95% and a probability of false alarm no greater than 5%.

- (3) Owners and operators subject to the requirements of this section shall have a program of enhanced leak detection reviewed and approved by the local agency within 6 months following notification by the board. The enhanced leak detection shall be implemented no later than 18 months following receipt of notification from the board and repeated every 36 months thereafter.
- (4) Owners and operators of underground storage tanks subject to the requirements of this section must notify the local agency at least 48 hours prior to conducting the enhanced leak detection test unless this notification requirement is waived by the local agency.
- (5) Owners and operators of underground storage tanks subject to the requirements of this section shall submit a copy of the enhanced leak detection test report to the board and the local agency within 60 days of completion of the test.

Authority cited: Sections 25299.3, and 25299.7, Health and Safety Code.

Reference: Sections 25283, 25291, 25292 and 25292.4, Health and Safety Code; 40 CFR 280.40 and 280.41.

Amend Title 23, Division 3, Chapter 16, Article 6, section 2660 and 2666 of the California Code of Regulations to read as follows:

2660. General Applicability of Article

- (a) This article describes the requirements for repairing or upgrading underground storage tank systems. Upgrades and repairs shall be properly conducted in accordance with this article and any additional manufacturers' specifications.
- (b) Section 2661 describes the requirements for repairing underground storage tanks, piping, or other underground storage tank system components that have caused an unauthorized release as defined in sections 25294 and 25295 of the Health and Safety Code.
- (c) Section 2662(b) describes upgrade requirements for underground storage tanks containing hazardous substances other than motor vehicle fuel. Sections 2662(c), and (d) describe upgrade requirements for all underground storage tanks containing motor vehicle fuel. Underground storage tanks which contain motor vehicle fuel and which are constructed of fiberglass, other non-corrosive materials, steel clad with fiberglass, or steel clad with other noncorrosive materials, are not required to comply with the requirements of section 2662(c), but are required to meet the requirements of section 2662(d).
- (d) Section 2663 describes the requirements for upgrading or repairing tanks using interior lining.

- (e) Section 2664 describes the requirements for upgrading tanks using bladder systems.
- (f) Section 2665 describes the upgrade requirements for spill and overfill prevention equipment.
- (g) Section 2666 describes the upgrade requirements for underground piping.
- (h) Upgrade requirements for underground storage tanks, spill and overfill prevention, and underground piping shall be completed no later than December 22, 1998. Requirements for under-dispenser containment, or under-dispenser spill control or containment systems, shall be completed no later than December 31, 2003.
- (i) As a preventive measure, an owner or operator may upgrade any underground storage tank constructed of any material which is not under pressure and which contains motor vehicle fuel as specified in sections 2662(a), (c), and (e). Before upgrading in accordance with this subsection, the owner or operator shall prove to the satisfaction of the local agency that the underground storage tank system has not caused an unauthorized release. If soil samples are taken, the owner or operator shall notify the local agency in advance of taking the samples.
- (j) Owners or operators shall maintain records of repairs, linings, and upgrades that demonstrate compliance with the requirements of this article for the remaining operating life of the tank.
- (k) Local agencies shall not approve a repair or upgrade unless it can be demonstrated that the underground storage tank system is structurally sound and the method of repair or upgrade will prevent unauthorized releases due to structural failure or corrosion during the operating life of the underground storage tank system.
- (l) The materials used in the repair or upgrading process shall be applied in accordance with nationally recognized engineering practices.
- (m) Materials used in repairs and upgrades shall be compatible with the existing underground storage tank system materials and shall not be subject to deterioration due to contact with the hazardous substance being stored.
- (n) Steel underground storage tanks that exhibit external corrosion during the course of repair or upgrade shall comply with the cathodic protection requirements of section 2635(a)(2).

Authority cited: Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Sections 25284.1, 25292, 25292.1 and 25296, Health and Safety Code; 40 CFR 280.21, 280.33 and 281.32(d)

2666. Requirements for Upgrading Underground Piping.

- (a) By December 22, 1998, all underground piping containing hazardous substances other than motor vehicle fuel shall be retrofitted with secondary containment meeting the requirements of section 2636.

- (b) By December 22, 1998, all underground piping containing motor vehicle fuel and connected to an existing tank shall be retrofitted with secondary containment unless the owner or operator demonstrates to the local agency that the piping is constructed of fiberglass reinforced plastic, cathodically protected steel, or other materials compatible with stored products and resistant to corrosion. The secondary containment system shall meet the construction, installation, and monitoring requirements of section 2636.
- (c) By December 22, 1998, all automatic line leak detectors for underground pressurized piping which is not secondarily contained shall be capable of shutting off the pump when a release occurs. In addition, the pumping system shall shut down automatically if the automatic line leak detector fails or is disconnected. In lieu of the above, for underground storage tank emergency generator systems, the leak detector must be connected to an audible and visible alarm to indicate a release or malfunction of the system.
- (d) All underground piping and secondary containment shall be tested for tightness after installation in accordance with section 2636(e).
- (e) By December 31, 2003, all existing underground storage tanks shall be retrofitted with under-dispenser containment, or an under-dispenser spill containment or control system. The under-dispenser containment or under-dispenser spill containment or control system shall meet, where applicable, the requirements of 2636(h)(2), or 2636(h)(3).

Authority cited : Sections 25299.3 and 25299.7, Health and Safety Code.

Reference: Section 25284.1, 25292 and 25292.1, Health and Safety Code; 40 CFR 280.21.